

### [54] LIGHTWEIGHT SILICATE AGGREGATE

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[\*] Notice: The portion of the term of this patent subsequent to May 20, 1997, has been disclaimed.

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#### Related U.S. Application Data

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[51] Int. Cl.<sup>3</sup> ..... **C04B 21/00; C04B 31/02**

[52] U.S. Cl. .... **501/80; 106/75**

[58] Field of Search ..... **106/40 R, 75, 288 B; 252/62; 501/80**

### [56]

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### [57]

#### ABSTRACT

An improved process for the preparation of an expanded, water insoluble silicate aggregate. Anhydrous alkali metal silicate is hydrated in the presence of a curing agent, then is subjected to rapid thermal expansion. The process eliminates the use of liquid silicates, and the reaction is conducted in an essentially dry state. The expanded product has extremely low bulk density. When combined with a suitable binder and applied to various substrates, the aggregate functions as an excellent thermal barrier.

**6 Claims, No Drawings**